**SPOOKY TILES**

**Project Outline**

Group leader and Game Logic Designer: Stephen Langford, slangford3

Design, Testing and CSS: Shaum Day, sday8

Design, Primary Tester and Presenter: Rohan Katkar, rkatkar1

Project Summary:

The goal of our project was to design an interesting game that would be different every time you played it. We accomplished this by designing our game, Spooky Tiles. Spooky Tiles is a memory matching game that involves face down tiles laid on a board. The player clicks a tile and flips the tile over showing the face. The player then chooses a second tile to flip over and if the face is the same, then they are considered a match. If the player chooses incorrectly, the tiles will be flipped back over and the order will remain the same when the user presses a reset button. The score will be based on the number of mismatched pairs of tiles the player flips over, i.e. the lowest score will be the best. The game will progress through 6 levels of increasing difficulty. The difficulty is increased by increasing the number of tiles presented for the player to match. The game will complete when the player has cleared the 6th level and the score will be saved for that user if the score in that game is lower than the previous saved score.

Style:

We decided to go with a Halloween theme as the original due date was on the week of Halloween. We themed the colors and fonts and images to associate with this. The tile images were created using Halloween themed emojis. We used CSS animation keyframes to animate an image on the title screen along with the animation of the buttons to visualize clicking/pressing.

Coding Logic:

We used php session variables to create an initial array that represented the ‘deck’ of tiles that was generated at the beginning of each level. The tiles were shuffled at the beginning of level. The buttons were displayed using php if conditions and for loops in the html to display the buttons in an aesthetic way so that they adjusted as more buttons were added each level.

Each tile was a button with a specific name that was named in the for loop of the css. The tiles were stored in an array that contained the face, the back, the matched/unmatched status and the clicked/unclicked status. The clicks were registered by using a create user function that read the number of the button and then changed the clicked status of the button. After two tiles were flipped the game checks to see if the face of the tiles is a match and will change the status based on the results. If no matches were found, when the player hits the reset button, the game will flip the tiles back over to display the back of the tile. If they matched the game will change the matched status to matched and will not flip the tiles over. There is game logic that prevents the player from flipping more than 2 tiles over at a time or from resetting when the user has only flipped one tile over.

The level will increment when the user flips all tiles over and matches them. The score is tracked by number of incorrect matches the player makes through the 6 levels of the game. The score is saved when the player completes the game. There is highscore functionality that displays the top 5 scores on the start screen.

We believe that this project accomplishes the goal of creating a game within the constraints of using only php and html/css to complete a game. We have included the login system that saves usernames and scores. There is username validation that prevents the same usernames from being used along with password validation that sets requirements for user’s passwords. Thank you for taking the tile to play and grade our project, **Spooky Tiles**.